REPORT OF THE

MINISTER'S ADVISORY COMMITTEE ON ACUPUNCTURE

January, 1988

Table of Contents

Executive Summary

A. INTRODUCTION 1

B. BACKGROUND 1

1. History and Philosophy
2. Definition

C. REVIEW OF LITERATURE 4

1. Methods and Techniques of Practice
   a. Methods
   b. Techniques
2. Identification of Meridians
   a. Anatomical Substrate
   b. Conductance Variation
3. Explanation of the Effects of Acupuncture
   a. Endorphins
   b. "Gate" Theories
   c. Serotonin
4. Health Care Uses
   a. Preventive Measures and General Health
   b. Non-painful Conditions
   c. Painful Conditions
   d. Complications and Side Effects
   e. Duration of Analgesic Effects

D. SURVEY OF NORTH AMERICAN LAWS ON ACUPUNCTURE 19

1. Canada
   a. British Columbia
   b. Alberta
   c. Ontario
   d. Quebec
   e. Other Provinces
2. United States

E. DISCUSSION AND RECOMMENDATIONS 21

1. Should the Practice of Acupuncture be Controlled?
2. Who Should be Permitted to Practise?
3. Is Superintendency Required?
4. Should Medical Practitioners be Regulated?
5. What Form of Regulatory Body Would be Necessary?
6. Use of the Title "Acupuncturist"
7. What are the Financial Implications of Regulation?
8. Education Standards

F. CONCLUSIONS 25

Tables

1. Disorders Treated by Acupuncture (from Le Roux et al., 1984)
2. Diseases Treatable by Acupuncture (World Health Organization)

Appendices

1. Terms of Reference
2. Members of the Committee
3. Submissions to the Committee
4. Summary of Regulation of Acupuncture in North America
5. Draft Educational Standards

Bibliography

Executive Summary

Acupuncture is one part of traditional Chinese medicine. Traditional theory holds that human ailments can be treated by adjusting positive and negative energy flows in the body, carried by meridians. Acupuncture points--where treatment is administered--are said to be the points where the meridians reach the surface of the body. "Non-traditional" acupuncture provides acute care based on a symptom-oriented approach to treatment (rather than according to Chinese medical philosophy) and is more widely accepted. The Committee has defined acupuncture as:

> THE PRACTICE OF AFFECTING THE FUNCTION OF ACUPUNCTURE POINTS, THEIR MERIDIANS AND THE PERTAINING PHYSIOLOGICAL STRUCTURES AND FUNCTIONS IN THE BODY BY MEANS OF NEEDLE INSERTION AND MANIPULATION, PRESSURE, ELECTRICAL STIMULATION, MASSAGE, MOXIBUSTION, OR THE USE OF ANY OTHER STIMULATING APPLIANCE (SUCH AS LASER OR ULTRASOUND).

Considerable effort has been made to understand the workings of acupuncture in Western scientific terms. With respect to the identification of meridians, there is statistically significant evidence that resistance to electrical current differs at acupuncture points and along meridians. However, no biological or physiological basis for these findings has been established.

With regard to a scientific basis for the effects of acupuncture, it has been shown the relief from pain and other symptoms is real and cannot be attributed to either a placebo effect or the power of suggestion. Acupuncture does raise the level of endorphins in the brain and other parts of the body. As well, serotonin--a neural transmitter known to increase the effects of analgesics and which is complementary to endorphins--increases in various parts of the body as a result of acupuncture. An additional factor under study involves a "gate" mechanism and theorizes that stimulation of nerves by acupuncture may inhibit the transmission of painful impulses from other parts of the body. The aspects of neurophysiology involved in these investigations are extremely complex and it is expected to be some time before the effects of acupuncture are fully understood.

The principal uses of acupuncture in North America have related to the treatment of pain. Although variations exist between individuals, it has been successfully used to treat lower back pain, arthritic pain, migraine headaches, various types of neuralgia and as an anaesthetic. In addition to pain, acupuncture has also been used to treat a variety of non-painful conditions including asthma, hiccoughs, obesity and as an aid to smoking cessation. Although the success rate can vary considerably between individuals and between conditions being treated, it is important to note that research indicates that complications and side effects from the use of acupuncture are rare.

Acupuncture is not expressly regulated in most Canadian provinces. As in British Columbia, most provinces have held it to be the practice of medicine and left it to the physicians' regulatory body to control its use. Quebec has regulated acupuncture since 1985--persons other than physicians must pass fairly stringent registration requirements and can only administer treatments pursuant to a medical certificate, issued separately for each patient, which is valid only for a limited time. Alberta has approved acupuncture for regulation and is now in the process of developing regulations. Ontario considered the regulation of acupuncture but determined that it was not required for a number of reasons.

The United Stated generally has a broader acceptance of the practice of acupuncture. At least 14 states permit independent practice while several more permit practice with some form of supervision.

The Committee examined a range of issues, in turn, concerning the regulation of acupuncture in British Columbia and produced a number of recommendations:

* Acupuncture should be formally controlled in some manner.

* Practice should neither be restricted to medical practitioners nor open to any member of the public.

* Superintendency of non-physicians should be required in most cases but the degree would vary in accordance with the state of the patient's health and the nature of the condition being treated.

* Medical practitioners should not be specifically regulated.

* Government should appoint the first regulatory body and subsequent bodies would be a combination of elected members and Government appointees.

* No person--including a medical practitioner--would be permitted to use the title "acupuncturist" unless registered in accordance with the regulations.

* The entire regulatory structure should be self-supporting.

A. INTRODUCTION

The former Minister of Health for the Province of British Columbia, Mr. James A. Nielsen, established a Committee in November, 1984, to inquire into the practice of acupuncture in British Columbia and to make recommendations concerning its regulation. The Terms of Reference (listed in Appendix 1) included a review of the literature, the present state of acupuncture in British Columbia, the status of acupuncture in other jurisdictions, and the appropriate scope of acupuncture practice for both medical practitioners and independent practitioners.

The Committee met 18 times between January, 1985, and the completion of the Report. Representatives of a number of statutory health care groups and acupuncture associations appeared before or made submissions to the Committee. As well, the Committee received correspondence and materials from other groups and individuals interested in acupuncture and received some correspondence referred by the Minister of Health on the issue. (A list of Submissions and Presentations is contained in Appendix 4.)

Considerable research into the literature about acupuncture was undertaken by a member of the Ministry of Health staff, on behalf of the Committee, and this comprises Parts B and C of the Report. The search for citations used computerized data bases available through libraries at the Ministry of Health, the Victoria General Hospital, and the Royal Jubilee Hospital. Citations for 2,668 publications since 1978 were examined and the list was reduced to 322 articles and texts which were relevant to the scope of this Report.

The Committee also wrote to every jurisdiction in North America for information on the practice and regulation of acupuncture in that state or province. Together, this information, the research into the literature, and the submissions constituted the background for the discussion and recommendations about the regulation of acupuncture that are found in Part E.

B. BACKGROUND

Acupuncture is one part of traditional Chinese medicine. Although acupuncture has been used for many thousands of years, some difficulty remains in defining it. Because definitions, including that used by this Committee, often rely on some of the philosophical aspects of acupuncture, we have included a brief history of acupuncture and its theoretical base.

1. History and Philosophy

Although the techniques of traditional acupuncture are believed to be several thousands years old, the first documented reference occurs in "The Yellow Emperor's Classic of Internal Medicine," published between

400 and 300 B.C. It was subsequently introduced to Europe where it was first documented in 1683. Initial enthusiasm following its introduction soon died out but it was used in varying degrees during the eighteenth and nineteenth centuries. Its history in Europe has been interpreted as a series of "re-discoveries" about two or three times a century. There are very few references to its use in North America before this century.

The essence of the theory behind acupuncture is a dual flow of energy within the body, referred to as "Yin" and "Yang," within the total energy life force known as Qi. These are referred to, respectively, as negative and positive forces, but they are considered to be complementary. Maintaining a balance between Yin and Yang is deemed essential to maintaining health in the individual. In broader terms, such a balance must be kept to ensure that the universe proceeds harmoniously. For example the rising and setting of the sun, the ebb and flow of the tides or the changing seasons. Natural disasters occur when Yin and Yang are not in balance.

Traditional theory holds that man is a microcosmic image of the universe and is subject to the same forces and laws. Qi (pronounced "chee") is the vital essence of all animal life, including man. Qi represents the harmonious mixture of Yin and Yang and, in the physical body, this is evidenced by health. The "vital energy" of Yin and Yang is said to circulate through the body along "meridians." Although some authors indicate there are up to 70 meridians on the body (e.g. Levine, 1980), most refer to 12 primary meridians which connect the main organs of the body. The meridians are believed to be connected to each organ (organs are not solely anatomical structures as they are in Western medicine) and ultimately each part of the body.

Acupuncture points are locations on the skin where the meridians surface. Tan et al. (1976) state that there are 365 of these points corresponding to the number of days in the lunar year. However, according to Rapson (1984) there are over 1,000 acupuncture points. Bland (1979) indicates that 657 were identified and named as early as the fourteenth century while Schutz (1979) puts the number over 800. For the purpose of this Report, the number of points shown on two acupuncture point "maps" were counted and both showed 361 points.

Disease is the dyscrasia of Yin and Yang which can manifest itself in various forms. There are no specific diseases as defined by Western medicine, symptoms are categorized according to the imbalance. Diagnosis would best be viewed as an art and is accomplished by interviewing, auscultation, listening, smelling and palpation, particularly of the wrists which contain six different pulses each. This diagnosis dictates the acupuncture points so that--according to traditional practice--the points are not set for each malady (Levine, 1980).

Although diagnosis is not dependent on scientifically-based testing it is very important in order to select the appropriate acupuncture points. In addition, palpation diagnosis depends on the interrelationship of

five organs within each of the two main organ systems. The heart, liver, spleen, lungs and kidneys are known collectively as "tsang" and are components of Yin. Those organs are said to have the capacity to store but not to eliminate which is another example of the lack of correspondence between the organs of traditional Chinese medicine and those of Western medicine. "Fu" is the collective term used for the five other organs which are components of Yang and are believed capable of elimination but not of storage. The "fu" organs are the gall bladder, the stomach, the large intestine, the small intestine, and the urinary bladder.

Traditional Chinese medicine has numerous methods of diagnosis but pulse diagnosis is considered to be the most important. Each of the twelve meridians is represented by one pulse. On each wrist there are three pulses at a shallow level and three at a deep level. The acupuncturist assesses each pulse on twenty-eight different qualities including strength, regularity of flow, fullness, speed and resiliency. Using this method a skilled practitioner is reported to be able to discover all current maladies and even previous illnesses which have an impact on present health. When the wrist is palpated with minimal pressure the six superficial pulses are assessed and with stronger pressure the deep six are assessed. The functional state of each meridian and ultimately the state of each organ is indicated by its appropriate pulse and, depending on the assessment of the twenty-eight qualities, they can be judged hyper-functional or hypo-functional.

Each of the ten organs above corresponds to and shares its name with one of the twelve meridians. The two other meridians are known by the mysterious names of heart constrictor and triple warmer. The latter is also called the three faci, the three burning spaces or the triple energizer.

Two other important tenets relating the meridians and organs are mentioned by some authors (e.g. Ogata, 1978), the Rule of Mother and Child and the Rule of Inhibition. Each organ is the mother of another organ and requires stimulation before the other organ, its child, can be treated. Similarly, each organ inhibits another organ according to the Rule of Inhibition and both organs would have to be considered in diagnosis and treatment.

The circulation of blood, or hsueh, is connected with the movement of Qi, the vital essence, because of the inextricable interconnections of blood vessels, meridians and the neurological system. Movement within the networks is subject to seasonal, lunar, circadian and other systems. The rhythms are conceptually similar to the Western belief in monthly endocrine and circadian rhythms. Some of the propositions of traditional Chinese medicine contradict rudimentary anatomy but that is not surprising considering the Chinese respect for the intact human body which resulted in a cultural taboo against dissection. Because acupuncture therapy, based on non-anatomical theory, has been used with apparent success for centuries, the concepts have persisted even after the introduction of anatomical study and dissection to Chinese medical training.

Each of the twelve meridians is said to follow the Midday-Midnight Rule where its maximum activity occurs at the same time every 24 hours. Doerner (1981) quotes biochemical studies which seem to support the notion of circadian rhythms of the anatomical versions of the organs.

2. Definition

The variation in wording for definitions of acupuncture is substantial and reflects not only the uncertainty of what acupuncture is but, also, the lack of agreement as to what it does and how it does it. For example, Dorland (1981) defined acupuncture as:

> "the Chinese practice of piercing specific peripheral nerves with needles to relieve the discomfort associated with painful disorders, to induce surgical anaesthesia and for therapeutic purposes." (p.29)

Another example is the definition developed by the Ontario Council of Health in 1974:

> "The insertion of a needle or needles to pierce the skin or mucous membrane of a person without the injection of substance to prevent, cure or alleviate a disease, illness or disability, or to prevent, abolish or alleviate the feeling of any pain or other mental or physical discomfort, sensation or feeling, and may include electrical stimulation through a needle or needles and the use of moxibustion."

These examples suggest the diversity of opinion about what acupuncture is and point out the difficulty inherent in defining acupuncture. The definition developed and used by the Committee is as follows:

> ACUPUNCTURE IS THE PRACTICE OF AFFECTING THE FUNCTION OF ACUPUNCTURE POINTS, THEIR MERIDIANS AND THE PERTAINING PHYSIOLOGICAL STRUCTURES AND FUNCTIONS IN THE BODY BY MEANS OF NEEDLE INSERTION AND MANIPULATION, PRESSURE, ELECTRICAL STIMULATION, MASSAGE, MOXIBUSTION, OR THE USE OF ANY OTHER STIMULATING APPLIANCE (SUCH AS LASER OR ULTRASOUND).

C. REVIEW OF LITERATURE

A considerable effort was made to review pertinent medical and non-medical literature from a wide range of North American, Chinese and European publications. This Part of the Report looks at some of the methods and techniques of acupuncture, efforts to explain acupuncture in Western scientific terms, and the conditions for which acupuncture has been used.

1. Methods and Techniques of Practice

a. Methods

The term acupuncture is an umbrella term which may include a number of different approaches or methods of practice:

* "Traditional" acupuncture: This approach is characterized by a holistic view of the patient. The practitioner makes a long and thorough examination of the patient using all the traditional methods of diagnosis which have been previously described. The patient is seen as a whole entity operating as a microcosm of the universe and the practitioner attempts to address deviations from homeostasis using the concepts of Yin/Yang balance. To practise this form of acupuncture the practitioner needs to be well versed in Chinese medical philosophy.

It is this aspect of acupuncture which Manfred Porkert (1979) refers to in his articles encouraging the amalgamation of Western and Chinese medicine. However, it has not been widely accepted by persons trained in Western medicine and much has been written about this lack of acceptance (e.g. Cassinari et al., 1983). There are two main reasons for the lack of widespread acceptance: first, the difficulties presented by the acquisition of traditional Chinese medical philosophy and, second, the approach as yet has not been subjected to extensive testing in the context of Western medical practice with the result that there are few published demonstrations of its general efficacy.

* "Non-traditional" acupuncture: This type of acupuncture is the form of practice most widely accepted by medical practitioners and most often referred to in the literature. It provides acute care based on a symptom-oriented approach to treatment. There have been numerous texts (e.g. Tan et al., 1976) published which show "recipes" on how to treat a wide range of medical conditions as well as additional points for complications. In China, this type of acupuncture was employed by the barefoot doctors who were responsible for extending first aid and immediate acute care to the rural areas. Most of the articles that describe acupuncture treatment by Western practitioners describe a combination of Western diagnostic methods by qualified physicians followed by condition-specific acupuncture treatment.

* "Surgical" acupuncture: The use of acupuncture for surgical anesthesia is not a separate type of practice but it has been widely reported as such in the popular media. Its use has been largely confined to China where, according to some authors (Bland, 1979), it is used for one-third of all surgical procedures. Other estimates of use are between 5 percent and 15 percent (Tsuei, 1983), 1 percent (Bonica, 1974), or less than 1 percent (Melzak and Wall, 1982). However, no credible statistics were uncovered to confirm any of the estimates.

The success rate in China for successful surgical analgesia is quoted at 90 percent (Bonica, 1974; Tan et al., 1976). However, the few anesthetists or surgeons in North America who have used the technique have not reported the same success. For example, a study by Mann (1974) had only a 10 percent success rate. The discrepancy may lie in the selection and preparation of patients and the definition of success.

The extent to which acupuncture has been used for anesthesia in China is open to question but it has been very sparingly practised in Western centres. According to Culpan and Butler (1984) acupuncture has not been considered satisfactory because of its prolonged onset of action,

variable and unreliable effects, lack of muscle relaxation, and maintenance of consciousness.

b. Techniques

The needles used are usually 30 gauge (0.35 mm), although a finer gauge is used for delicate work. They range in length from one-half inch to four inches--depending upon the acupuncture point. Needles may be inserted perpendicular to the skin surface, diagonally (30 - 60 degrees) or almost horizontally and the patient should experience a sensation which is crucial to successful acupuncture. The sensation is Teh Ch'i ("acquiring vital energy") and is variously reported as a dull ache, a heaviness, a numbness or even a tingling sensation at the place where the needle was inserted.

Also, the needles can be stimulated for short periods (10 - 20 seconds) and then removed, or they can be stimulated for periods of a few seconds with rest intervals in between, or they can be stimulated continuously for a few minutes or much longer.

The methods of stimulation vary as well. According to traditional practice, the needles are manually twirled or agitated up and down and that method is still used to a large extent in private practice. However, many authors report that a low voltage electric current has been used to provide the necessary stimulation. According to Tan et al. (1976), the electric current supplied by an Acupuncture Stimulator is superior to the manual method because:

* it is less fatiguing on the practitioner, particularly when treatment is prolonged;

* the degree of stimulation can be accurately and evenly adjusted; and

* a stronger degree of stimulation can be achieved than by manual stimulation.

The electrical current applied can vary in frequency, intensity and duration. The frequencies that have been stated in the literature range from 2 - 3 cycles or pulses per second to 200 per second. Intensity ranges from 9 to 28 Volts (Tan et al., 1976). Alternating current is normally used because direct current has been reported to produce small burns.

The intensity and the frequency are important determinants of the type of effect. According to a recent review of research (Han and Terenius, 1982), low frequency high intensity current gives generalized analgesia with prolonged latency and aftereffect. High frequency, low intensity current which is more commonly associated with Transcutaneous Electrical Nerve Stimulation (TNS or TENS), produces more localized or segmental analgesia. There is preliminary evidence that the different methods may involve different neural pathways to produce a similar but not identical effect (Han and Terenius, 1982).

TENS is a technique that has many similarities to acupuncture and has been referred to as a type of acupuncture. TENS uses surface electrodes to deliver a continuous series of electrical pulses to the skin. There is a considerable amount of evidence (see Rapson, 1984) that TENS is an effective way to treat chronic pain. The fact that it has been shown to be effective in a majority of cases and is non-invasive has created a demand for portable machines. Battery operated units are now available through more than forty manufacturers (Melzak and Wall, 1982).

2. Identification of Meridians

Because of their importance to acupuncture, and to Chinese medical philosophy generally, much has been written about meridians. The meridians are believed to conduct vital energy between the various organ systems and between the interior of the body and the surface. They represent the connecting links between the acupuncture points and form an integral part of the "maps" used to determine the points for needle insertion.

a. Anatomical Substrate

Attempts to identify an anatomical substrate corresponding to the Chinese meridian maps have not achieved any recognizable success. One particularly suspicious attempt identified a series of minute corpuscles and ducts that corresponded to the acupuncture point-meridian system. According to a review by Chan (1984), the existence of such an anatomical system is not given much credibility because the histologic techniques used to identify the structure were not reported and the work has never been duplicated.

b. Conductance Variation

Although an anatomical basis for meridians has not been successfully identified there have been numerous studies of the bioelectric characteristics of the system. The most successful have related the electric conductance of the skin to the acupuncture point-meridian system. The most famous work in this area was done in Japan in the 1950's after the discovery that some points on the skin had much higher electrical conductance capabilities than other points. The imaginary line which joined the points became known as "ryordoraku" (good conductance line). The lines joining the points have been shown to have at least a very rough correspondence to the meridians laid out by Chinese acupuncturists. The developers of the Japanese system agree that there is some correspondence between the two systems but maintain that they are different (Chan, 1984). Although beset by methodological and technical problems, investigators in China (e.g. Zong-Xiang, 1981) and Europe (e.g. Reichmanis et al., 1976; Hyvarinen et al., 1977) have independently found that acupuncture points exhibited lower resistance to an electrical current than the surrounding skin surface. The following points summarize some of the work done in this area:

* The resistance to an electrical current measured at acupuncture points differed reliably from that measured at control points in

a clinically observable as well as a statistically significant sense (Wulfson et al., 1976; Krippner et al., 1973).

* The acupuncture points along a specific meridian of the forearm have been shown to exhibit less cutaneous resistance to an electrical current than immediately adjacent sites (Reichmanis et al., 1976).

* At low voltage the electrical resistance offered at acupuncture points averages 50 percent less than it does at non-acupuncture points (Niboyet as translated by Zong-Xiang, 1981).

* The impedance to an AC current passed between two acupuncture points on the same meridian is reliably less than the impedance between two adjacent control points (Reichmanis et al., 1976).

* The low electrical resistance of acupuncture points and meridians has been reliably demonstrated in living individuals and it has been shown to persist after death and after embalming (Shenberger, 1981).

* The resistance characteristics have been confirmed with AC and DC current, high and low frequencies and various voltages.

* Horses and other animals have low resistance points bilaterally and symmetrically that appear in positions that correspond to those on the human body (Krueger, 1976).

The above studies are only examples of a host of studies done in China, Europe and North America in the last few years. However, Chan (1984) cautions that factors do exist that confound accurate skin resistance measurements: the cross-sectional area of the detecting electrode, the amount of pressure that is used, the length of time the electrode remains in place, and the stratum corneum which contributes over 90 percent of the electrical resistance can be easily damaged by the measurement procedures used.

In spite of these cautions, there is now general agreement that the skin exhibits variation in resistance to an electrical current and that the variation seems to coincide with the position of acupuncture points and meridians.

The fundamental impediment that still remains to the acceptance of acupuncture points and meridians is the fact that no biological or physiological entity has been discovered which might be responsible for the identified electrical characteristics (Chan, 1984). If a physical reason could be uncovered for the electrical characteristics it would pave the way for more general recognition of acupuncture points and meridians. In the meantime, plausible explanations have been advanced such as enlargement of skin glands, or changes in surface blood vessels. Many acupuncture points are adjacent to specific points along peripheral nerves and many points on the face are located where cranial nerves emerge from the skull (Rapson, 1984)

or muscle-tendon junctions (Gunn, 1977). Also, 67 percent of acupuncture points correspond to motor points (Gunn et al., 1976) and 71 percent of acupuncture points correspond to "trigger points" (Melzak et al., 1977).

Several studies have reported that needling of trigger points instead of acupuncture points is often used in clinical settings and has been included under the name acupuncture. Trigger points are tender areas that respond to mild pressure with intense pain at the trigger point but also a referred pain is often felt at other places on the body. Trigger points have been identified for referred back pain, cardiac pain and facial pain and for the pain from appendicitis and other visceral organs. The points are quite reliable across individuals. Melzak et al., (1977) compared the trigger and acupuncture points for some pain syndromes and found a 71 percent correspondence between them for the same syndrome. Stimulation of trigger points results in the reduction or eradication of pain in the referred area. Several theories exist as to why trigger points are formed. Most are physiologically plausible but definitive evidence as to what they are has not been forthcoming. A review by Macdonald (1983b) places the first report of trigger points in 1936 and notes that they have been used in diagnosis and treatment of chronic pain to some extent since then. There is not only close correspondence between trigger and acupuncture points but studies have shown that the pathways linking trigger points and areas of referred pain share much of the Chinese meridian system.

Confirmatory evidence in support of any of the explanations for the electrical characteristics of the skin has not been forthcoming. However, the persistent reliability of the phenomenon has initiated a series of investigations into the changes in skin resistance during various functional and pathological states. Zong-Xiang (1981) has summarized the functional state research done in China and indicates that changes in the pathological state of the viscera are accompanied by alterations in electrical resistance at the appropriate acupuncture points in distant parts of the body. The performance of various bodily functions also results in resistance alterations at the appropriate acupuncture points and alterations can also be brought about by environmental changes. Much of the Chinese work has centered on relating the changes that occur in meridians as a result of various bodily functions.

Of the work outside China, that of Nakatani is most often referred to but it has not been translated from the original Japanese. Expanding on his original "ryordoraku" work, he studied skin resistance in thousands of sick and well people and discovered that certain diseases were reliably represented by changed skin resistance along specific meridians. From his work a system of diagnosis and therapy was developed based on balancing the electrical resistance of specific meridians with their bilateral counterpart on the other side of the body (Wing, 1977). The patient holds an electrode and another is moved across the skin to determine the conductance variation and treatment is provided by transcutaneous electrical stimulation. The

meridian balancing machines are all essentially the same and consist of a 0 - 200 microampere meter, a power supply from 8 - 21 Volts D.C., a hand-held, indifferent electrode and a search electrode made so that it can easily pass over the skin with contact. Although there is some evidence of changes in meridian electrical characteristics in the presence of some diseases, no reasonable evidence was uncovered assessing the beneficial effects of the treatment.

Another diagnostic treatment system based on the electrical conductance of the skin that has been developed over the last thirty years began in West Germany in the 1950's and has since been popularized by its developer Reinhardt Voll. The system, referred to as Electroacupuncture According to Voll (EAV), uses a device called a Dermatron to diagnose, and often to treat, a wide variety of pseudo-medical conditions. The theory behind the system is that the information supplied by body conductance changes indicates energy changes which can lead to sickness when allowed to progress beyond certain limits. The machine measures the resistance at the acupuncture points and the difference in electrical conductance allegedly enables a trained practitioner to detect pathology long before the patient is aware of it. Again, no articles were found that presented any objective information on the beneficial effects of treatment although Voll (1978) reports two anecdotes where kidney stones and a carcinoma of the urinary bladder were discovered prior to their detection by standard medical techniques. The lack of supporting evidence has not hindered the popularization of his method in the literature (e.g. Schuldt, 1978, Levine, 1980) but the articles are very theoretical in nature and couched in such vague terms that it is difficult to determine what the diagnostic procedures are actually assessing and what the treatment procedures are expected to accomplish.

The popularity of this approach is apparent from the numerous instances of praise from many authors in the field. For example, Levine (1980) published a review paper which was supposed to cover the theories explaining acupuncture's effect. The generally accepted theories were given only superficial treatment and the most important--endorphins--was not mentioned. Instead, the "bioelectric theories" of changing electrical potentials is favoured and EAV is accepted as the practical application of the theory. According to Levine (1980) the other theories are not able to explain the permanent effects (and cures) brought about by Electroacupuncture According to Voll. As previously mentioned, no reasonable evidence was uncovered to substantiate any permanent effects or cures brought about by EAV.

3. Explanations of the Effects of Acupuncture

The initial response to reports of the successful application of acupuncture, particularly to chronic pain, was to explain them on the basis of known mechanisms. Placebo was one of the first to be suggested as responsible for the reported pain reduction. A placebo involves the administration of a medication which contains no active ingredients but which is believed by the patient to contain active ingredients. Those occasions where the patient responds as if there were active ingredients is called the placebo effect.

The placebo hypothesis was tested by a series of studies which compared the effects of acupuncture (according to meridian and point selection) with some form of "mock" acupuncture. Mock acupuncture has taken many forms ranging from inert electrodes attached to the skin surface to the insertion of acupuncture needles two or three centimeters from the appropriate acupuncture point (random needling). Several studies have reported that the placement of inert electrodes on the skin surface results in relief of chronic pain in about 30 percent of patients. For example, MacDonald (1983a) found that inert electrodes produced a 25 percent improvement rate.

Several authors have compared the effects of true acupuncture with random needling in the belief that needling in an area of the body which is not the appropriate spot according to acupuncture practice will not produce a physiological response. The belief disregards an often reported mechanism called diffuse noxious inhibitory control (DNIC) whereby any noxious stimulus can reduce the perception of pain from other areas of the body. In a review of ten studies that used random needling, Lewith (1984) pointed out the wide variation in improvement rate between studies but concluded that the improvement rate averaged about 50 percent across studies. He also makes the point that these studies should be viewed as comparisons between good acupuncture technique and poor acupuncture technique rather than acupuncture versus placebo.

In addition to placebo, hypnosis and suggestion were offered as reasons for acupuncture's effects and there were moderate correlations between pain relief and psychological scales measuring hypnotizability and suggestibility (e.g. Katz, 1974). In a review of hypnosis studies, Berman (1979) indicates that there is only a very weak relationship between hypnotizability and relief of pain from acupuncture.

The evidence (summarized as follows) would not appear to support the proposition that pain relief achieved by acupuncture is due to any great extent to placebo, hypnosis, or suggestibility:

* The success of acupuncture in treating animals mitigates against a strong involvement by suggestion, hypnosis or placebo (Gibb, 1981).

* The duration of the effect in many cases far surpasses the time where those mechanisms could be expected to operate.

* The placebo effect accounts for the same proportion of pain relief as would be expected in drug trials, about 30 - 35 percent (Lewith and Machin, 1983).

a. Endorphins

Endorphins are naturally produced, opiate-like substances that were discovered in the mid-1970's by several investigators working independently (e.g. Li, 1976; Hughes, 1975). The subsequent discovery that neurons have specialized receptors for endorphins (Snyder et al., 1977) confirmed the capacity of the body to self-regulate the

perception of painful stimuli. The discovery that acupuncture treatment raises the level of endorphins in the brain (Pomeranz, 1977) was followed by the work of Clement-Jones et al. (1980) who demonstrated increased levels of endorphins in the spinal fluid.

Investigators of the mechanisms of acupuncture have concluded that acupuncture produces a widespread systemic response altering the levels of neurotransmitters in different parts of the body (e.g. norepinephrine, serotonin) and the levels of hormones (e.g. prolactin, corticosteroid).

Recent research has sought to confirm a causal link between endorphins and acupuncture analgesia. One approach has been to inject naloxone, which is an antagonist to endorphins at the neuronal receptor sites, and measure the degree to which it blocks the analgesic effects of acupuncture. Han and Terenius (1982) have reviewed such studies done on humans and report that acupuncture analgesia was reversed by naloxone in each study. They also report studies which show that the analgesic effects of low frequency TNS (2 Hz) was reversed by naloxone but that of high frequency TNS (100 Hz) was not affected by naloxone. Here, again, is some evidence that TNS may involve different mechanisms than acupuncture.

In their review of investigations into the effect of naloxone on analgesia and the effect of the pre-administration of D-phenylalanine on acupuncture analgesia, Price and Rafii (1984) also conclude that there is a causal link between endorphins and acupuncture analgesia.

b. "Gate" Theories

Several "gate" theories have been proposed to explain the control of painful stimuli since the work of Melzak and Wall in 1965. The original theory suggested that pain transmission to the brain may be blocked by the closing of a "gate" at the level of the spinal column. According to the theory, the pain pathways converge as they reach the spinal cord and their rate of transmission to the central nervous system could be controlled by cells in the substantia gelatinosa in the dorsal horn of the spinal cord.

Man and Chen (1972) then proposed a two gate control theory which involved a second gate at the level of the thalamus. However, in their most recent formulation of the theory, Melzak and Wall (1982) do not include a reference to either the work of Man and Chen or the possibility of a second gate. The recent version is substantially the same as the first, with changes and additions made to coincide with the considerable number of studies that have provided anatomical (e.g. Kerr, 1975) and biochemical evidence to support the main propositions of the theory.

The theory provided a credible neurophysiological explanation for acupuncture. Acupuncture needles produce only a mild, relatively painless stimulus which cause the gates to close inhibiting more painful stimuli from reaching the central nervous system. Present

work on the theory involves investigations into the complex inter-dependencies between different kinds of nerve fibres in inhibition or excitation of pathways to the brain (Melzak and Wall, 1982).

The articles that reviewed the pain control mechanisms of acupuncture discussed the involvement of endorphins independently from the discussion of gate control theory. Most authors also concede that the ultimate explanation for acupuncture's effect will be some combination of presently known mechanisms. The substantia gelatinosa is the place where the gates control the processing of painful stimuli and it is also the place where endorphins have been identified after acupuncture.

Another series of studies (e.g. MacDonald, 1983b) relate acupuncture to possible gate control mechanisms. Painful transmissions from various areas on the body share the same paths to the central nervous system. Within the dorsal horn (that is, the place where the gates are believed to be) painful inputs converge. These findings relate to acupuncture in that they provide explanations as to why stimulating pathways from one body tissue may result in the inhibition of painful impulses from other parts of the body served by the same segment of the spinal cord.

c. Serotonin

Serotonin is a neural transmitter known to increase the effects of analgesics. After acupuncture treatment the presence of serotonin has been shown to increase in the brain, the brain stem and various other places in the body. It is believed to be both complementary and supplementary to endorphins. It is present in descending pathways at the level of the raphi magnus nucleus in the brain stem and acts to inhibit the processing of painful transmissions to the brain. Two discoveries have compromised its involvement in acupuncture analgesia. The first is the finding that destruction of the serotonin pathways does not substantially affect acupuncture analgesia and any disruption that does occur is only transient. The second is the finding that serotonin may be released only by high frequency electro-stimulation and not by low frequency stimulation which is usually characteristic of acupuncture (Levine, 1980; Rapson, 1984).

4. Health Care Uses

According to traditional Chinese medicine, acupuncture can be used not only to treat pain and specific maladies but also as a preventive measure and an aid to general health.

a. Preventive Measures and General Health

The aim of this type of acupuncture treatment is to restore homeostatic balance within the body as well as between the organism and the environment. Porkert (e.g. 1979) has written compelling articles suggesting the desirability of greater integration of Western and Chinese medicine. In contrast to the volume of articles dealing with acupuncture and pain that appears in Western medical literature,

the use of acupuncture in a preventive or general health sense has not generated much investigation or comment in mainstream North American medical periodicals or journals. A search for articles dealing with this aspect of acupuncture uncovered few in English. Most of those discussed the practice of traditional Chinese medicine in a broad sense (e.g. herbs, massage, diet). In one article on the use of acupuncture for holistic purposes, Dale (1982) points out that there are strong tendencies to resist the incorporation of holistic acupuncture into Western medical practice but he also points out that there is evidence of growing acceptance as medical practitioners seek alternatives to the limitations of Western medicine.

There is some indirect evidence in support of acupuncture's capacity to regulate internal body rhythms and stress related disorders because acupuncture has been shown to release a variety of hormones into the bloodstream (Steiner, 1983).

b. Non-painful Conditions

As would be expected, most of the investigations into acupuncture's clinical uses have dealt with its effectiveness against chronic pain, but there were some reports describing its application to non-painful disorders. Before reviewing those reports, a study reporting acupuncture's overall effectiveness will be described.

Rapson (1984) collected diagnostic and treatment outcome data from a Toronto medical practice totally devoted to acupuncture. There were 235 patients in the study who were treated for a variety of complaints most of which were some form of chronic pain. Almost 80 percent of the treatments overall resulted in distinct improvement. Most of the improvement rate was due to the high success rate with painful conditions although 67 percent of treatments for non-painful conditions resulted in reports of distinct improvement. Reports describing acupuncture's effectiveness in treating non-painful conditions have been reviewed by Steiner (1983) and most published studies showed positive results. However, caution is advised because few, if any, studies have been done to test acupuncture's effectiveness on each condition. Many more studies will have to be performed on diverse populations, in various settings, using different methods before any conclusions could be drawn. Issues that remain inconclusive include the reliability of treatment outcome, the patient characteristics required for success and acupuncture's utility in relationship to other treatment modalities.

The use of acupuncture to treat non-painful disease symptoms appears to be gaining greater acceptance. Table 1 shows a list of painful and non-painful diseases and conditions that were treated during one calendar month at a hospital in Taipei, Taiwan. Over 50 percent of the conditions are typified by pain but the remainder ranged from strabismus to smoking cessation (Le Roux et al., 1984).

The World Health Organization lists 43 diseases (Table 2) that lend themselves to acupuncture treatment. The list is based on clinical

experience, not on controlled research, and the appearance of specific diseases is not meant to indicate the extent of acupuncture's efficacy in treating them (Bannerman, 1979).

Acupuncture has been used to treat asthma for many years. Dias et al. (1982) compared the effects of acupuncture treatment with placebo treatment in two randomly constituted groups of 10 asthmatics each. The acupuncture group received needling at traditional acupuncture points while the placebo group received needling at points in the temporal region of the head which are traditionally used for migraine headaches. In spite of demonstrated pre-treatment equality between groups and good control efforts, all the patients in the placebo group demonstrated improved pulmonary function after treatment while only three patients in the acupuncture group showed improvement. Although the authors consider the unexpected results to be due to a placebo effect, that is unlikely because such an effect would have appeared in the acupuncture group as well.

Christensen et al. (1984) also compared the effect of acupuncture treatment with placebo treatment in two randomly constituted groups. The acupuncture treatment was administered at traditional points while the placebo needles were placed at nearby points which were deemed to be physiologically independent of the traditional points. The group that received traditional treatment showed a modest improvement in symptoms and pulmonary function over the nine weeks of treatment. The results are compromised by the fact that the placebo group also showed improvement but not as consistent as the acupuncture group.

Takishema et al. (1982) administered a three-staged treatment procedure that consisted of the insertion of needles at a short distance from the accepted acupuncture points followed by manual stimulation of the needles. The needle was then removed and inserted in one traditional point but not stimulated. That was followed by stimulation of the point and its bilateral counterpart. Measurements of airway resistance and subjective improvement were taken. The presentation of the results was quite ambiguous but they are clear enough to indicate that some patients showed substantial improvement while others showed an actual worsening of symptoms. This study is noteworthy because all patients inhaled a bronchodilating drug (orciprenaline) after receiving treatment and all patients showed improvement in symptoms after inhalation.

These three articles are fairly representative of recent studies on the effect of acupuncture on asthma. While some patients treated with appropriate acupuncture showed substantial improvements immediately after treatment, the results are compromised by the finding that patients who receive some alternate form of treatment also tended to show an improvement. While not denying the possibility of a true acupuncture effect, most authors conclude that some placebo effect is not surprising in a disease that is known to have a psychological component.

After reviewing 11 studies published over the last decade, So and Lam (1983) concluded that acupuncture has a bronchodilating effect but it

is not as great as that achieved by inhaled bronchodilators such as isoprenaline or ipratopium bromide. They also concluded that it may have a weak preventive effect after extended treatment.

The use of acupuncture for smoking cessation was begun after nurses who were undergoing acupuncture treatment for obesity reported a diminished desire to smoke as well as an aversion to tobacco smoke. Choy et al. (1983) inserted small acupuncture needles into the "hunger" point located in the tragus of each ear in 514 volunteers. Although they quote an immediate success rate of 88 percent, that is based on only 339 subjects because the remainder were not able to complete four weeks of treatment without smoking (and are probably more appropriately considered failures rather than incompletes). After two years, 69 percent of those who had stopped were still not smoking.

Ionescu-Tirgoviste (1980) reported a study in Eastern Europe that provided acupuncture treatment for 32 stomach ulcer sufferers, 27 of whom had had more than one previous relapse. A normal diet was prescribed except spices, alcohol, coffee and cigarettes. Clinical signs disappeared in virtually all patients and at the end of six months, 65 percent of the patients had had no recurrence of symptoms. While the re-establishment of "energetic equilibrium" in the meridians (according to traditional Chinese medicine) may be another way of describing the autonomic tonus necessary for appropriate gastric secretion and motility, the preferable explanation may simply be the reduction in acid secretion.

Another study of the effects of acupuncture therapy on ulcer patients used classical acupuncture loci and compared acid output before and after treatment. The mean rate of acid output was reduced to one-fourth of its original volume and the maximal rate was reduced to one-half its original volume. Both differences were clinically and statistically significant (Sodipo, 1979).

In commenting on the variation in the results of clinical trials of therapeutic acupuncture in 1977, Rubin identified numerous factors other than acupuncture itself that contribute to the differences in results. These include the method used, the skill and training of the acupuncturist, needle placement, point selection and the population treated. Until enough evidence accumulates that addresses those factors, conflicting reports will continue to appear and no unequivocal judgments can be made about acupuncture's effect on non-painful conditions.

c. Painful Conditions

Although there have been too few studies available to permit unequivocal statements about acupuncture's effect on many medical conditions, there have been many studies of acupuncture's effect on pain. The mechanisms by which acupuncture is thought to control pain have already been discussed so this section will review the literature on clinical trials.

Several studies reported on acupuncture's overall effectiveness in treating a variety of pain syndromes. In a series of articles, Lewith (e.g. 1983) has reviewed studies into the effects of needle placement and has classified the insertion techniques into two groups: real or true acupuncture where the needles are inserted into areas deemed appropriate for the condition by customary practice, and "sham" acupuncture where the needles are placed at different parts of the body deemed inappropriate for the condition. Inappropriate needle placement was effective with 50 percent of chronic pain patients while true acupuncture was effective for about 60 percent to 75 percent of chronic pain patients.

The following examples of clinical trials for specific pain conditions will indicate the reliability of acupuncture's effect on chronic pain and the varying conditions which affect outcome. Chronic pain conditions of musculoskeletal origin have responded most reliably to acupuncture (Bannerman, 1979) although data published by Rapson (1984) indicated that headaches responded most reliably in her acupuncture clinic.

A controlled study was carried out by Gunn (1980) on two groups of persons suffering chronic low back pain who had not responded to eight weeks of conventional treatment. During the clinical trials all patients continued with their conventional treatment but half were also given acupuncture treatment at motor points. The immediate and long-term effects clearly favoured the acupuncture group. The study had some weaknesses (notably patient selection) but it was important because it compared a group that received conventional treatment with a group that received conventional treatment plus acupuncture and the results clearly favoured the additional therapy.

The study was also important because of the acupuncture techniques used. The acupuncture points were not chosen on the basis of meridian loci but were motor muscle points supporting the belief of several authors that it is not necessary to stick to historically defined acupuncture points (e.g. Melzak and Wall, 1982) to obtain analgesia.

Macdonald et al. (1983a) compared the effects from acupuncture with those from inert surface electrodes on two matched samples of low back pain sufferers. Subjective and clinical assessments were made before and after treatment and the results clearly favoured the acupuncture group. Two points about this study are important. Firstly, this is another example of needles being inserted at trigger points. As mentioned previously, these are spots where pain results from the application of pressure and these coincide to a significant degree with traditional acupuncture points. Some practitioners are using that method of point selection and it appears to produce results that are as positive as the traditional method. Secondly, significant efforts were made to control for extraneous factors such as sex, duration of chronic pain, age, and severity of pain. The acupuncture treatment was shown to be clinically and subjectively superior to placebo treatment.

Acupuncture has been used for the relief of arthritic pain, also with reliable results. Two example studies compared the effects of random needling to acupuncture (meridian loci) treatment and obtained partially conflicting outcomes. Man and Baranger (1974) reported that acupuncture produced highly positive results for patients with rheumatoid arthritis, whereas random needling produced essentially negative results for other patients with the same complaint. A study by Gaw et al. (1975) used patients with osteoarthritic pain and reported that both methods of needling produced pain relief and there was no difference between groups. These two studies are quoted here to point out that the effectiveness of acupuncture itself is no longer a research question but interest has shifted to questions of appropriate methods and differences between patient populations.

Juanila (1982) compared acupuncture therapy with drug therapy for osteoarthritic pain and concluded that acupuncture was superior in pain relief and there were fewer side effects with acupuncture. Acupuncture has been compared to steroid injections (conventional treatment) for tennis elbow and 60 percent of the acupuncture patients reported relief where only 30 percent of patients reported relief with steroids (Brattenberg, 1983).

In addition to musculoskeletal conditions, acupuncture has been successfully employed on headache pain. In a British study, Loh et al. (1984) compared acupuncture treatment for muscle tension and migraine headache with conventional medical treatment and acupuncture was judged superior to medical treatment. The study is important because patients in each group were allowed to switch to the alternate form of therapy after three months of treatment. The patients who received little or no relief from acupuncture switched to medical treatment after three months and the unsatisfactory results were repeated after medical treatment. On the other hand, one half of the patients who switched to acupuncture after unsatisfactory medical results experienced "moderate" to "great" improvement after acupuncture.

It has been clearly established that acupuncture can result in reduced headache occurrence rate and less severe headaches. In addition, a Swedish study (Baivie and Brattenberg, 1984) measured its effect immediately after treatment and again six to seven months later and reported that the improvement in the number and severity of headaches that occurred after treatment was maintained six to seven months later.

Limited data is available on acupuncture's success in treating the neuralgias. Rapson (1984) reported that 14 of 21 patients with facial pain experienced pain relief. Levine et al. (1975) reported very limited success with three cases of post-herpetic neuralgia.

Another area where acupuncture has been used to control pain is in dentistry. Bland (1979) reported observations in China where acupuncture was used, apparently alone, to control the pain of tooth extraction with no indications of pain from the patients.

d. Complications and Side Effects

Comments made by practitioners and researchers indicate that complications are very rare. A recent report by Jeffreys (1983) described the development of endocarditis in a patient at risk because of a cardiac lesion. The needle had remained in her ear for a week to stop her smoking. Criticizing the report, Burdon (1983) suggested that patients at risk for endocarditis should be advised not to undergo acupuncture therapy. Rogers (1981) has reviewed papers reporting complications, mostly pneumothorax, and concluded that serious complications arise from improper use of acupuncture or incompetent practitioners. After over 25,000 treatments at the Fairfield Health Centre Acupuncture Clinic in Victoria, Dr. Chu (personal communication) has reported no complications due to acupuncture.

e. Duration of Analgesic Effects

The question of how long the analgesic effects of acupuncture can be expected to last, is an important consideration. Few studies have reported any long-term follow-up. Man and Wing (1982) published the results of follow-up of 837 chronic pain patients two years and six years after acupuncture treatment. Unfortunately, mailed questionnaires were used and they received only 22 percent return rate at two years and only 9 percent at six years so the results cannot be considered at all representative of the patient group. However, it is noteworthy that over 50 percent of those responding reported marked improvement or total abolition of pain at two and six years, so acupuncture can be said to produce long-lasting results at least for some patients. In his review of the few follow-up studies, Lewith (1984a) is able to conclude only that acupuncture's effects diminish over time.

It is important to note that the data presented in chronic pain studies indicated a considerable amount of variation in the degree of response to acupuncture treatment confirming a further conclusion by Lewith (1984b) that acupuncture has a sustained analgesic effect but it is as yet unpredictable at the level of the individual patient.

D. SURVEY OF NORTH AMERICAN LAWS ON ACUPUNCTURE

There has been considerable development in the statutory recognition of acupuncture in North America over the past 15 years. This section briefly reviews the regulation of acupuncture in various provinces and states (a summary is contained in Appendix 4).

1. Canada

a. British Columbia

British Columbia, like most of the other Canadian provinces, has no legislation dealing expressly with acupuncture. The College of

Physicians and Surgeons has ostensible responsibility for controlling the practice of acupuncture because it has been held to be the practice of medicine. (In October, 1977, the British Columbia Court of Appeal refused an appeal from the conviction of an acupuncturist for unlawfully practising medicine: R. v. Smith, CA 770510.)

The College has not been actively seeking convictions against acupuncturists because of the number of persons practising acupuncture and because of its belief that this role is inappropriate for the College. It has sought a review of the status of acupuncture for some time in an effort to have this issue resolved.

b. Alberta

Under the authority of the Health Disciplines Act, the Health Disciplines Board reviewed the practice of acupuncture and determined that it ought to be regulated. A Committee was established in 1984 with the purpose of developing regulations to govern the practice of acupuncture. Although these regulations have not been finalized, it is expected that they will at least provide for registration (including educational standards), conduct and competency standards, and limitations on practice.

c. Ontario

The Provincial Government established a Health Professions Legislation Review to examine the need for regulation--and the optimal form of regulation--for each health profession in that province. The inquiry was essentially a two-stage process and recommended forms of regulation were considered only after a determination was made about the necessity of regulation.

In the case of acupuncture, it was determined that four criteria for self-regulation had not been met--there was not a substantial risk of harm, there was no Canadian diploma or degree available, widespread compliance was not likely, and the size of prospective membership was not sufficient to support adequate self-regulation. A recommendation was then made to the Minister of Health that regulation was not required and this was accepted.

d. Quebec

In 1985, regulations under the Medical Act were passed to control the practise of acupuncture by both physicians and persons other than physicians. A physician is required to satisfy the Credentials Committee of the profession's governing body that he has completed a training program in acupuncture consisting of not less than 300 hours of theoretical and practical training.

Regulations governing the practice of acupuncture by persons other than physicians are considerably more complex. A register is maintained by the physicians' governing body. Evidence of educational training is required and applicants must pass written and oral examinations. (The training is detailed in the regulations and

involves 1000 hours of theoretical and practical experience.) Once registered, an "acupunctor" may only practise acupuncture if a medical certificate, signed by a physician, is presented. The certificate must confirm that a medical examination has been conducted, describe the patient's condition, and indicate whether or not certain medications have been prescribed. The certificate is only valid for a maximum of six weeks or ten treatments and must be renewed thereafter. [The Committee has learned that a legal challenge to these regulations is under way.]

e. Other Provinces

There has been little or no legislative activity with respect to acupuncture in the other provinces. Acupuncture has been deemed or held to be the practice of medicine and is not expressly regulated except to the extent that provincial medical colleges have made internal rules for their members. Newfoundland permits dentists to use acupuncture, in addition to medical practitioners, and it permits others to be designated but no such designations have been made.

2. United States

The United States generally has a broader acceptance of the practice of acupuncture than Canada. There are at least 14 states that specifically authorize acupuncturists to practise independently, without medical supervision. As well, there are a number of other states that license "acupuncture assistants" or that permit acupuncture under the supervision of a physician. There are some variations between the states in terms of what constitutes "supervision." It does not always require the presence of a physician but may include pre- and post-examinations by the physician or reports to the physician by the acupuncturist. In addition to these groups, several states permit the practice of acupuncture by dentists, chiropractors, and podiatrists. A small number of states require a physician to complete a course and pass an examination respecting the practice of acupuncture.

E. DISCUSSION AND RECOMMENDATIONS

The Committee feels that the matter of regulating acupuncture is not a "yes" or "no" proposition. Before drawing conclusions about the desirability of licensure for acupuncturists, and before making recommendations, the Committee considered a number of issues in turn. These issues are complex and interrelated, and they bear directly on the form of regulation--if any--that might be most desirable in British Columbia at this time.

The option of maintaining the status quo does exist. However, it was seemingly the difficulties in enforcing the present provisions in the Medical Practitioners Act, among other things, that led to the establishment of this Committee. As a result, the status quo is not a recommended option.

1. Should the Practice of Acupuncture be Controlled?

It is clear that some degree of risk is present for a patient who has needles inserted under the skin or who is treated by passage of an electrical current through the body. The risks may range from minor infections to peritonitis and cardiac arrhythmia and transmission of infectious conditions such as hepatitis or AIDS. Thus, the first issue is whether the degree of risk associated with acupuncture justifies some form of control by government or an independent agency.

The Committee believes that it is not satisfactory in a province where high standards of care are demanded of other health care providers to simply ignore the circumstances under which acupuncture is offered. The demands by the public for alternatives to traditional health care have not slackened and yet it is likely that many people have little or no knowledge of the attendant risks.

The RECOMMENDATION of the Committee is that acupuncture be subject to some form of control. "Control" might range anywhere from wide-open, largely unregulated practice by anyone to prohibition on practice by non-physicians. Choice of the form of control could be derived from an examination of the succeeding questions.

2. Who Should be Permitted to Practise?

The decision by the British Columbia Court of Appeal--that acupuncture constitutes the practice of medicine--has meant that only members of the College of Physicians and Surgeons of British Columbia (or persons exempted under section 73 of the Medical Practitioners Act) are legally permitted to offer acupuncture treatment. Thus, the issue for the purposes of this Committee is effectively whether or not persons who are not members of the College should be permitted to practise acupuncture.

Reaching a decision about practice by persons who are not medical practitioners requires consideration of the need for medical training in the use of acupuncture. The College of Physicians and Surgeons has taken the position that acupuncture is a sophisticated, invasive procedure that calls for traditional medical diagnosis of the condition. Moreover, it argues that subsequent administration of acupuncture must be in the context of the individual's overall care and treatment regimen. The College maintains that this approach is fundamental for the protection of the public and is most likely to result with treatment by persons with formal, western medical training.

Proponents of practice by persons other than medical practitioners point to the expertise developed by persons who specialize in one type of health care service. Based on the extensive educational programs that are available and the opportunity to practise to a degree ordinarily not employed by medical practitioners, it is argued that acupuncturists are well qualified to perform acupuncture. Analogies are drawn with other health care providers who "specialize" in such professions as optometry, chiropractic, physiotherapy, and a host of others that are recognized by statute.

It has been demonstrated that a specific body of knowledge related to acupuncture has become highly developed and, particularly since the early 1970's, has become widely disseminated in the Western world. The development of this knowledge has led, in turn, to the establishment of schools of acupuncture throughout North America and elsewhere in the world. Programs are most often of three or four years duration with a mix of basic life sciences training, theoretical training in traditional Chinese acupuncture, and clinical experience in the techniques of acupuncture. (British Columbia's first school of acupuncture was established in 1985, in Victoria, and its first graduates will complete the program in 1988.)

The principal options for consideration here are practice only by medical practitioners, practice by any person who meets established criteria, practice by any person who meets established criteria--subject to some form of superintendency, or practice by anyone. The RECOMMENDATION of the Committee is that practice be permitted by persons who meet established criteria. However, the need for superintendency requires further consideration and is addressed in the following section.

3. Is Superintendency Required?

The overriding concern identified by the Committee in connection with the practice of acupuncture related to the condition of the patient. The consensus was that, in view of the nature of acupuncture treatment and the broad range of symptoms and conditions for which individuals seek relief through acupuncture, it would not be appropriate to permit acupuncture to be practised without some controls to guard the welfare of the patient. However, on the other hand, it seemed apparent that a blanket rule of superintendency would not necessarily serve a useful function. As a result, it was agreed that the optimal mechanism for supervision should be based on the medical diagnosis of the condition being treated and take account of the general health of the patient and any existing treatment regimen.

Patient conditions were broadly grouped into six categories and the recommendations of the Committee have been set out separately with respect to each:

* "Life-style" conditions (e.g., smoking cessation, weight loss, alcohol/drug withdrawal)--the Committee RECOMMENDATION is that no superintendency is required.

* Conditions of "un-ease" having no apparent medical cause (e.g., malaise, fatigue, anxiety, insomnia)--the Committee RECOMMENDATION is that the patient must be advised to seek medical advice if no improvement is achieved within two months or if the condition worsens or if new symptoms develop.

* Chronic medical problems (e.g., headache/migraine, arthritis, low back pain, trigeminal neuralgia, shingles, other low-grade chronic pain, nocturnal enuresis, constipation, irritable bowel, hiccough, bronchial asthma, hives)--the Committee RECOMMENDATION is that the patient must be advised to see his physician if he

has not been examined for this condition in the previous six months. If no relief or improvement has occurred within two months of acupuncture treatment of if the condition worsens, or if new symptoms develop, acupuncture must be discontinued until the patient has obtained further medical advice.

* Acute medical problems which are generally self-limiting within a few weeks and which are not normally a serious threat to health (e.g., toothache, tennis elbow, heartburn, menstrual pain, common cold, laryngitis, sinusitis, rhinitis, tonsillitis, mild gastritis, diarrhea, mild dermatitis)--the Committee RECOMMENDATION is that if no improvement has occurred within two weeks of acupuncture or if the condition worsens or if new symptoms develop, acupuncture treatment must be discontinued until the patient has obtained medical advice.

* Active serious medical conditions (e.g., cancer-related pain, angina, renal colic, ulcerative colitis, Parkinson's Disease, multiple sclerosis)--the Committee RECOMMENDATION is that treatment must only be adjunctive to and with the full knowledge of a medical practitioner (or dentist, if appropriate).

* Anesthesia--the Committee RECOMMENDATION is that acupuncture must only be administered under the direct supervision of a medical practitioner (or dentist, if appropriate).

4. Should Medical Practitioners be Regulated?

It was accepted that the practice of medicine by a physician is controlled through a variety of mechanisms including the existing regulatory structure of the College and hospital boards. Although acupuncture may not be specifically regulated by the College, the combination of guidelines established by the College and the general standards of competency required of College members are felt to be adequate. The RECOMMENDATION of the Committee is that no specific control be developed with respect to the practice of acupuncture by medical practitioners, subject to the discussion below concerning use of title. It was also agreed that the same recommendation should apply to members of the College of Dental Surgeons.

5. What Form of Regulatory Body Would be Necessary?

Consideration was given to the form of any regulatory body to be established, both in the short- and the long-term. It will be essential to empower a board to be responsible for various aspects of the practice of acupuncture including educational standards, registration requirements, competency, conduct, and discipline.

One possibility is to nominate the board of an existing group such as the Acupuncture Association of British Columbia to act as the interim board until registrations were underway and proper elections could be held. The advantage to this approach is that there is an established structure with some experience in these matters that would be expected

to be capable of performing the necessary tasks. However, because the Association does not represent all practising acupuncturists in the Province, the RECOMMENDATION of the Committee is that the Government appoint a body, on an interim basis, that would be representative of all the principal groups of acupuncturists in the Province. This body would eventually be succeeded by a body consisting mostly of elected acupuncturists but which would include other persons appointed by the Government.

6. Use of the Title "Acupuncturist"

Based on the understanding that a regulatory body may be established to control the practice of acupuncture, it would be desirable to reserve the use of the title "acupuncturist" to persons that are determined by such a body to have the necessary qualifications and ability. A significant part of the rationale for regulating acupuncture is to enable members of the public to determine who is, in fact, qualified to practise acupuncture. The RECOMMENDATION of the Committee is that the use of the title "acupuncturist" (or any term or phrase that is likely to convey an ability to practise acupuncture) be reserved to persons meeting the established criteria and that medical practitioners, dentists and other professionals be precluded from the use of the title unless they satisfy the same criteria.

7. What are the Financial Implications of Regulation?

The RECOMMENDATION of the Committee is that any regulatory structure that may be established should be entirely self-supporting without public funding for any of its operations.

The matter of inclusion of acupuncture as a supplementary benefit under the Medical Services Plan was not within the mandate of the Committee and was not examined.

8. Education Standards

The Committee considered the matter of educational requirements and its RECOMMENDATION is that any regulatory body that is established make it an early priority to establish minimum educational standards for registration. Draft requirements for consideration by a regulatory body are included in Appendix 5.

F. CONCLUSIONS

It is clear from the range of submissions made to the Committee and the number of letters referred by the Minister of Health that there is considerable public interest in the matter of acupuncture in British Columbia. While the Committee has made every effort to take account of the issues and concerns identified with respect to the practice of acupuncture, it may be desirable to circulate this Report to selected individuals, or to the public generally, in an effort to get feedback on the proposals that it contains.

Whether or not any public input on the Report is sought, any decision to proceed with some or all of the recommendations it contains will require some period of time to establish the start-up process. Based on the experience of other jurisdictions, it might be expected to take 12 to 24 months after statutory authority has been established to develop the regulations necessary to govern the practice of acupuncture in the Province.

* * *

TABLE 1

DISORDERS TREATED BY ACUPUNCTURE (FROM LE ROUX ET AL., 1984)

"Painful" Conditions	"Non-Painful" Conditions
Ankle pain	Chronic cough
Arm pain	Color-blindness
Chest pain	Diabetes mellitus
Degenerative joint disorder	Dizziness
Elbow pain	Endocrine problems
Facial pain	Facial paralysis
Finger pain	Gynaecological disorder
Foot pain	Hearing impairment
Gastrointestinal dysfunction	Hemiplegia
Headache	Hypertension
Heel and sole pain	Menopausal syndrome
Herniated intervertebral discs	Myopia
Knee pain	Nasal polypus
Low back pain	Numbness of extremities
Migraine	Obesity
Muscle spasm	Parkinsonism
Myofibrositis	Psychosomatic disorder
Neck pain and stiffness	Respiratory problems
Peripheral neuralgia	Rhinitis
Postoperative pain	Sequelae of trauma
Referred pain	Smoking (to stop)
Rheumatic arthritis	Spondylosis
Sciatica	Strabismus
Shoulder pain	Tinnitus
Sprain and strain	Trigger finger disorder
Tendonitis	Tremor of the hand
Tennis elbow	Vision impairment
Trigeminal neuralgia	Weakness of extremities
Upper back pain	
Wrist pain	

Adapted from Le Roux et al., 1984.

TABLE 2

DISEASES TREATABLE BY ACUPUNCTURE (WORLD HEALTH ORGANIZATION)
(FROM BANNERMAN, 1979)

UPPER RESPIRATORY TRACT
- Acute sinusitis
- Acute rhinitis
- Common cold
- Acute tonsillitis

RESPIRATORY SYSTEM
- Acute bronchitis
- Bronchial asthma (most effective in children and in patients without complicating diseases)

DISORDERS OF THE EYE
- Acute conjunctivitis
- Central retinitis
- Myopia (in children)
- Cataract (without complications)

DISORDERS OF THE MOUTH
- Toothache
- Post-extraction pain
- Gingivitis
- Acute and chronic pharyngitis

GASTROINTESTINAL DISORDERS
- Spasms of oesophagus and cardia
- Hiccough
- Gastroptosis
- Acute and chronic gastritis
- Gastric hyperacidity
- Chronic duodenal ulcer (pain relief)
- Acute duodenal ulcer (without complications)
- Acute and chronic colitis
- Acute bacillary dysentery
- Constipation
- Diarrhoea
- Paralytic ileus

TABLE 2 (continued)

NEUROLOGICAL AND MUSCULOSKELETAL DISEASE

Headache
Migraine
Trigeminal neuralgia
Facial Palsy (within 3 - 6 months)
Pareses following a stroke
Peripheral neuropathies
Sequelae of poliomyelitis (within 6 months)
Meniere's disease
Neurogenic bladder dysfunction
Nocturnal enuresis
Intercostal neuralgia
Cervicobrachial syndrome
"Frozen shoulder"
"Tennis elbow"
Sciatica
Low back pain
Osteoarthritis

APPENDIX 1

PURPOSE AND TERMS OF REFERENCE

FOR THE

COMMITTEE TO EXAMINE THE PRACTICE AND REGULATION

OF ACUPUNCTURE IN BRITISH COLUMBIA

PURPOSE: To advise the Minister of Health with respect to practice and regulation of acupuncture in British Columbia.

TERMS OF REFERENCE:

1. To review the literature pertaining to acupuncture and establish a theoretical, practical and scientific rationale for the practice of acupuncture.

2. To inquire into and report on the nature and extent of the practice of acupuncture in British Columbia and, in particular, the number of practitioners and their professional affiliation, if any, and the number of persons presenting to acupuncturists for treatment.

3. To determine the appropriate scope of acupuncture practice for both medical doctors and independent practitioners.

4. To examine the practice and regulation of acupuncture in other jurisdictions.

5. To determine what kind of legislation would best reflect the acceptable practice of acupuncture in British Columbia.

6. To determine whether there will be a need for acupuncture training programs in the Province and, if a need is identified, whether such programs should be apprenticeship, college and/or medical school based.

November 7, 1984

APPENDIX 2

MEMBERS OF THE COMMITTEE

Chairman:	Mr. J. Christopher Lovelace Assistant Deputy Minister Management Operations Ministry of Health
Member:	Dr. Jone Chang Director of Pain Clinic Vancouver General Hospital and Clinical Associate Professor Department of Anaesthesia The University of British Columbia
Member:	Dr. Ronald S. Puhky Physician and Surgeon Salt Spring Island
Member:	Dr. Douglas O. Schneider Senior Medical Consultant Medical Services Plan Ministry of Health
Member:	Ms. Mary Watterson President Acupuncture Association of British Columbia
Member:	Mr. York Wong Acupuncture Association of British Columbia
Secretary:	Mr. Alan Moyes Manager of Legislation and Policy Ministry of Health

* * *

Researcher:	Mr. William J. Kierans Research Officer Ministry of Health

APPENDIX 3

SUBMISSIONS AND PRESENTATIONS TO THE COMMITTEE

1. British Columbia Medical Association
2. College of Physicians and Surgeons of British Columbia
3. College of Dental Surgeons of British Columbia
4. Association of Naturopathic Physicians of British Columbia
5. Association of Physiotherapists and Massage Practitioners of British Columbia
6. British Columbia Chiropractic Association
7. British Columbia Association of Podiatrists
8. Professor Manfred Porkert
9. Mr. David C. Kailin
10. Acupuncture Association of British Columbia
11. United Acupuncturists Association of British Columbia
12. Vancouver Chinese Acupuncture Association

APPENDIX 4

SUMMARY OF REGULATION OF ACUPUNCTURE IN NORTH AMERICA

(See attached charts.)

WHO can practice in addition to physicians?

(** indicates supervision required)

Province	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
[Alberta]							No information
Manitoba	no	N/A	no	no	no	no	The College has deemed acupuncture to be the practice of medicine. A 1983 policy statement said: "Acupuncture should only be performed by members of the medical profession who adequately familiarize themselves with the technique." Other uses should be confined to research.
New Brunswick	no	N/A	no	no	no	no	The College has deemed acupuncture to be "a medical act which may be carried out on either a clinical or experimental basis after the establishment of an appropriate diagnosis. The College stated further that "the possibility should exist that eventually this technique could be carried out by other properly trained health professionals under the supervision of a physician."
Newfoundland	yes	1976	yes	no	yes	no	The Cabinet may make rules on the advice of the Newfoundland Medical Board concerning persons who may practice acupuncture and under what circumstances. No persons or groups have been approved to date.
Nova Scotia	no	N/A	no	no	no	no	The Provincial Medical Board has deemed acupuncture to be the practice of medicine.
Ontario							The entire matter of occupational regulation is presently being examined by the Health Professions Legislation Review.
Prince Edward Island	no	N/A	no	no	no	no	It is assumed that acupuncture is considered to be the practice of medicine.
Quebec							[Material to be translated]
Saskatchewan	no	N/A	no	no	no	no	Acupuncture is assumed to be the practice of medicine. The Deputy Minister noted that most of the practice of naturopaths consists of acupuncture.

State	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
Alabama	yes	1975(?)	no	yes	no	no	"(1) Acupuncture is deemed by the Medical Licensure Commission to be an experiemental procedure of which the safety and medical effectiveness has not been established. The Commission therefore determines that while acupuncture practice by licensed physicians should not be absolutely prohibited, some safeguards are necessary to insure that the public is not harmed or victimized by unprofessional practices, such as the unskilled or uninformed application of acupuncture treatment, or unfounded claims of effectiveness."
Alaska	yes	1974	no	no	no	no	"Each acupuncture applicant shall meet all of the qualifications prescribed [for physician applicants] and shall meet those requirements of experience or education in the practice of acupuncture as may be required by the [State Medical] Board."
[Arizona]	no	N/A	?	no	?	?	A court declared that acupuncture was not the practice of medicine. Physicians who use acupuncture must submit quarterly reports of its use (including diagnosis, treatments, results, etc.). Present status is uncertain.
[Arkansas]	no	N/A	no	no	no	no	The Attorney General has ruled that acupuncture is the practice of medicine.
[California]	yes		yes	yes	yes	Podiatrist	To obtain an acupuncture licence a person must: (1) take 2250 hours of clinical training, (2) take 600 hours of theoretical training, and (3) pass an examination
Colorado	no	N/A	yes	no	no	no	The Attorney General recently rendered an opinion that acupuncture is the practice of medicine and is thus limited to physicians.
Connecticut	no	N/A	no	no	yes**	no	Policy of Department of Health Services that acupuncture constitutes the practice of medicine but can be practised by others under direct supervision of a physician.

State	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
[Delaware]			no	no	no	no	Physicians must show "evidence of training in acupuncture and a research protocol".
District of Columbia		1974	no	no	yes**	no	A physician must be physically present during the performance of acupuncture by an acupuncturist.
Florida	yes		no	no	yes	no	To obtain a certification as an acupuncturist a person must: (1) take 2 years training (or a tutorial) or (2) have 5 years experience acceptable to the board, and (3) pass an examination
Georgia	yes		no	no	no	no	Physician must have 100 hours of training acceptable to the board. Board must also approve a "scientific protocol of investigation" because acupuncture is deemed an experimental procedure.
Hawaii	[yes]	1974	yes	no	yes	no	To obtain an acupuncture licence, a person must: (1) take 576 hours of academic study, (2) take 480 hours of clinical training, or (3) have a private tutorship with a licensed acupuncturist for 2000 hours in 2 years, and (4) pass an examination.
Idaho	no		yes	no	no	no	Acupuncture is deemed by the board to be the practice of medicine.
Illinois	yes		yes	no	no	no	A bill is presently before the Legislature to permit the practice of acupuncture by those with training but the licensing body does not expect this to pass.
Indiana	no	N/A	yes	no	no	no	The licensing board considers acupuncture to be the practice of medicine.
Iowa	no	N/A	yes	no	no	no	The licensing board considers acupuncture to be the practice of medicine.

State	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
Kansas	no	N/A	no	yes	no	no	The licensing board considers acupuncture to be the practice of medicine. Chiropractors successfully sued for the right to practice acupuncture in 1975.
Kentucky	no	N/A	no	no	no	no	The licensing Board considers acupuncture to be the practice of medicine. "The Board discourages its use in anything other than a clinical setting."
Louisiana	yes	1975	no	no	no	Acupunct. Assist**	Physicians must have 6 months training. An "acupuncturists' assistant" must complete 36 months of training in an approved school and can only work under the "physical direction, control and supervision of a physician or [a physician certified as an acupuncturist].
Maine	no	N/A	no	no	no	no	The registration board considers acupuncture to be the practice of medicine.
Maryland	yes	1983	yes	no	yes	no	Physicians must be registered to practice acupuncture. Any applicant for registration must: (1) take at least 1200 hours of study (including at least 300 hours of clinical training), (2) perform acupuncture outside the State for at least 3 years, (3) perform acupuncture inside the State for at least 3 years before these rules come into force, (4) pass an examination, or (5) show the equivalent qualifications in a certificate from another jurisdiction. An acupuncturist can only work under the "general supervision" of a physician who may impose conditions on the treatment by the acupuncturist.
[Massachusetts]	yes		no	no	yes**	no	Supervision does not mean physical presence but requires the physician to examine the patient, consult with the acupuncturist and authorize the treatment in writing.

State	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
Michigan	no	N/A	no	no	no	no	The Board issued a policy statement in 1981 that deemed acupuncture to be the practice of medicine but added that it was not "an accepted form of medical treatment ... at this time". The statement said that acupuncture should be limited to hospitals and research centres.
Minnesota	no						A decision by a former Commissioner to regulate acupuncture was never implemented. Present rules permit various occupations to apply for registration but this has never been done for acupuncturists.
[Mississippi]	yes	1982	yes	no	no	no	"It is strongly recommended that any physician or dentist employing [acupuncture] in their practices should have records of attending a course or courses approved for continuing medical education in that subject....".
Missouri	no		no	no	no	no	Acupuncture is considered to be surgery (practice of medicine).
Montana	yes	1974	yes	yes	yes	no	Physicians, dentists, chiropractors and podiatrists must take a course and pass an exam but have a major exemption from a large number of other courses. Acupuncturists must pass courses approved by the board and pass the exams.
Nebraska	no		no	no	no	no	The courts have interpreted the Medical Practice Act as restricting acupuncture to physicians.
[Nevada]	yes	1973					To obtain an acupuncture licence a person must: (1) complete 1400 hours of study at an approved school, (2) have practised for 6 years (?), and (3) pass an exam. There are 4 different exams depending on the type of licence sought: (1) Dr. of traditional Oriental medicine, (2) Dr of acupuncture, (3) Dr. of herbal medicine, and (4) acupuncture assistant

State	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
New Hampshire			no	no	no	no	The board considers acupuncture to be the practice of medicine.
New Jersey	yes	1983	no	no	yes	no	To obtain a certificate as an acupuncturist a person must: (1) have a B.A. plus take an approved 2 year course in acupuncture, (2) have completed an approved tutorial program, or, (3) have "at least 3 years experience practising the enactment of this act ...". The board has an ultimate discretion to refuse a certificate.
[New Mexico]	yes	1981	no	no	yes	no	To obtain an acupuncture licence a person must: (1) have received a diploma from an approved 2 year program including at least 500 hours of supervised clinical experience, and, (2) pass an examination. The board may also approve a private tutorship. There is also a continuing education requirement.
[New York]	yes	1975	yes	no	yes	"specialists' assist."	Physician or dentist must complete 100 hours of instruction. To obtain an acupuncture licence, a person must: (1) have practised acupuncture for 10 years, (2) have a licence from another jurisdiction recognized by the board, and (3) communicate well in English. A specialist's assistant may be licensed if he has: (1) graduated from an acceptable school of acupuncture, (2) takes the 100 hours of physician training, and (3) has 5 years of acceptable experience.

State	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
North Carolina	no	N/A	no	no	no	no	The licensing board considers acupuncture to be the practice of medicine.
North Dakota	no	N/A	no	no	no	no	The licensing board considers acupuncture to be the practice of medicine.
Ohio	no	N/A	no	no	no	Podiat.	The court decided in 1975 that acupuncture constitutes the practice of medicine. A position statement issued by the Board in 1979 requires physicians and podiatrists to take appropriate training. Further, the use of acupuncture should be confined to pain treatment or investigation or research.
Oklahoma	no	N/A	yes	yes	yes	no	Completely unregulated -- apparently the Board of Medical Examiners has not yet made a determination on acupuncture.
Oregon	yes	1975	no	no	yes	no	To obtain an acupuncture licence, a person must have: (1) at least 700 hours of study as specified, (2) 12 months clinical training, (3) at least 200 hours related training, (4) "adequate knowledge of human anatomy ... and sterilization techniques", and (5) ability to communicate well in English. Must also pass any exams prescribed. An acupuncturist may only treat a patient if (1) he has been referred by a physician or, if (2) treated by a physician, dentist, chiropractor, naturopath or nurse in the past year for something other than cancer or cardio-vascular disease he consents to release of his treatment records and diagnosis. Treatment in the case of a referral requir e the acupuncturist to report back to the physician.
[Pennsylvania]	no	N/A	no	no	no	no	Acupuncture is considered to be the practice of medicine.

State	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
[Rhode Island]	yes	1978			yes	"acupuncture technician" and "acupuncture assistant"	To obtain an acupuncture licence, a person must: (1) complete an acceptable course, (2) have practised acupuncture for 10 years, and (3) pass an examination. An assistant must have completed a 3 year course, have practised for 3 years, and pass an exam. A technician must have 2 years of college and have 5 years experience in acupuncture. A person seeking acupuncture treatment must provide the acupuncturist with the results of a diagnostic exam completed by a physician within the previous 12 months.
South Carolina	yes	1976	yes?	no	Yes**	no	Acupuncturists may only practise with the approval of the Board of Medical Examiners and under the supervision of a physician or dentist.
[South Dakota]	no	N/A	no	no	no	no	The board considers acupuncture to be the practice of medicine.
[Tennessee]							"The Board of Medical Examiners allows any licensed healing arts professional who is allowed to puncture the skin to practise acupuncture. This includes physician's assistants."
[Texas]	yes		no	no	yes	no	A court decision held that limiting acupuncture to physicians infringed on the individual's "constitutional right of privacy" -- very few physicians were qualified and so limited his choice unreasonably. An acupuncturist may be licensed after completing at least a 2 year training tutorship. The [referring?] physician must retain supervision and control of the acupuncturist but this does not mean physical presence.

State	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
Utah	yes	1983	no	no	yes**	no	To obtain an acupuncture licence, a person must have: (1) 2 years of college (anatomy, etc), (2) completed a 2 year acupuncture program and either 500 hours of clincal training or certification from another jurisdiction, and (3) pass an examination. An acupuncturist may only practise "under the direction, supervision and responsibility of an in association with a physician". Further, he is limited to the designation "acupuncture practitioner".
Vermont	no	N/A	no	no	yes**	no	The Board of Medical Examiners issued a position paper stating: "Acupuncture is the practice of medicine and may be performed only (1) by a physician fully registered in the State of Vermont or (2) by an acupuncturist in the employ of this physician after examination of the physician with the acupuncturist, and written authorization by this physician. This physician retains full legal responsibility for the competence of acupuncturist, for the acupuncture and any and all consequences thereof."
Virginia	yes	1975 1984	no	no	no	Podiatrists	Physicians and podiatrists must have 100 hours of training in an approved school to be registered to perform acupuncture.
[Washington]	yes		no	no	no	"Acupuncture physician's assistant"	To be registered, a person must: (1) 2 years of university (in sciences), (2) 2 years "didactic training" including at least 700 hours of acupuncture, (3) 1 year clinical training including at least 350 hours of supervised practice. (These regulations are apparently in the midst of being revised).
[West Virgina]	no	N/A	no	no	no	no	Physicians must register with the Board before practising acupuncture.

State	Acupuncture Regulated?	First Enacted	Dentists	Chiropractors	Acupuncturists	Others	Comments
Wisconsin	no	N/A	no	no	no	no	The Board considers that acupuncture is the practice of medicine.
Wyoming	no	N/A	no	no	no	no	The Board considers that acupuncture is the practice of medicine.

APPENDIX 5

DRAFT EDUCATIONAL STANDARDS

Prerequisites

All practitioners who train in this Province or in any other North American or European jurisdiction shall have completed a minimum of two academic years of post-secondary education obtained either at University or College. These years should have been spent in general sciences and humanities or in nursing or other health-related areas. Exceptions may be made for specific achievements and work and life experience.

YEARS 1 and 2--Academic Training

Approved acupuncture training programs for the practice of acupuncture in British Columbia must include the following subjects taught over two academic years:

I Basic biochemistry, molecular biology and cellular physiology and the physiology of nutrition and endocrinology -

100 hours

II General psychology, counselling skills, training in life-style management and preventive medicine, personal development skills -

200 hours

III Anatomy - gross, microscopic and surface anatomy. Basic western physiology including neurophysiology and neuroanatomy -

100 hours

IV Western medical pathology; the pathological processes of diseases; etiology; the outcome and prognosis of disease (includes microbiology and epidemiology)-

100 hours

V History and philosophy of medicine east and west and the cross-cultural study of healing practices. A survey of various other healing methods seen in our society--e.g. chiropractic, psychology, naturopathy, physiotherapy, homeopathy, osteopathy, etc. to familiarize students with other health care practices -

30 hours

VI Western medical terminology including the interpretation of medical charts and reports and comments on patients medical condition -
30 hours

VII Chinese medical terminology including pinyin names of acupuncture points and other significant aspects of Traditional Chinese Medicine -
30 hours

VIII Introduction to Western clinical medicine. The basic clinical knowledge required to evaluate and triage patients. Emphasis will be on the recognition of changes in symptomatology and of the development of serious or potentially life-threatening conditions requiring medical attention. Includes emergency first aid and Cardio-Pulmonary Resuscitation -
60 hours

IX Foundation of Traditional Chinese Medicine. A study of the theories, concepts and methodologies of T.C.M. including classical diagnostic procedures and therapeutic methods -
220 hours

X Acupuncture theory, practice and techniques: The location of meridians and points. Needling techniques. The techniques of electroacupuncture, moxibustion, and acupressure-massage -
150 hours

XI Microsystems: The practice of uricular acupuncture and that of the scalp and other microfocal systems.
50 hours

XII Introduction to clinical skills. Case presentation, analysis, history taking, discussion and individual practice in this area with assignments of a minimum of 10 fully completed case histories and diagnoses for the year -
100 hours

YEAR 3--Clinical Training

I Clinical presentations, analysis and case observations, using clinic patient videotapes, a study of treatment regimens and overall clinical approaches in traditional acupuncture. Discussion of problem cases and cases which should be referred back to western M.D.s. Practical clinical management skills -
120 hours

II Fundamental Qi techniques, the de-stressing and self-healing methods of Tai Qi Quan and Qi Gong will be taught -

45 hours

III Clinical observation:

Students will be assigned to a qualified acupuncture practitioner for 30 clinical days over the year to observe and chronicle the conditions seen and treated -

180 hours

IV Supervised practice:

Two days per week of supervised diagnosis, evaluation and treatment of patients--restricted to the school clinic or the office of a fully qualified acupuncturist. Two hundred treatments on at least 20 different patients are required -

240 hours

V (Optional) The use of Chinese patent and herbal formulae and the practical use of western herbs to aid therapy -

100 hours

VI Chinese dietary therapy and exercise therapies -

30 hours

VII Practice management and bioethics and medical record keeping -

30 hours

VIII Research design: how to read and evaluate research articles. How to develop one's own research models and studies -

30 hours

BIBLIOGRAPHY

Baivie, J., and Brattenberg, G. "An Evaluation of Acupuncture Treatment for Migraine." Acta Neurological Scandinavica. 98, 268-269, 1984.

Bannerman, R. "Acupuncture the W.H.O. View." World Health. 24-29, December, 1979.

Benswanger, C. "When Patients Ask: What is Acupuncture?" American Journal of Acupuncture. 10(1), 71-73, 1982.

Berman, D. "Pain Relief and Acupuncture: The If, Why and How." American Journal of Acupuncture. 7(1), 31-40, 1979.

Bland, J. "An Exact Science." World Health. December, 1979.

Bonica, J. "Anaesthesiology in the People's Republic of China." Anaesthesiology. 40, 175-186, 1974.

Brattenberg, G. "Acupuncture Therapy for Tennis Elbow." Pain. 16, 285-288, 1983.

Burdon, D. "Acupuncture Needles as a Cause of Bacterial Endocarditis." British Medical Journal. 287, 689, September, 1983.

Cassinari, V., Foscendini, A. et al. "Non-medical Treatment of Ischemic Cerebrovascular Disease." European Neurology. 22 (suppl.) 124-129, 1983.

Chan, S. "What is Being Stimulated in Acupuncture: Evaluation of the Existence of a Specific Substrate." Neuroscience and Biobehavioural Reviews. 3, 25-33, 1984.

Choy, D., Lutzker, L., et al. "Effective Treatment for smoking Cessation." American Journal of Medicine. 75, 1033-1036, 1983.

Christensen, P. Laursen, L. et al. "Acupuncture and bronchial asthma." Allergy. 39, 379-385, 1984.

Chung, S., and Dickenson, A. "Pain Enkephalin and Acupuncture." Nature. 283, 2430254, 1980.

Clement-Jones, V., McLaughlin, L., et al. "Increased beta-endorphin but not met-entriphalon levels in human cerebrospinal fluid after acupuncture for chronic pain." Lancet. ii, 946-949, 1980.

Culpan, S. and Butler, M. "Acupuncture." New Zealand Medical Journal 97, 129, February 22, 1984.

Dale, R. "The Origins and Future of Acupuncture." American Journal of Acupuncture. 10(2), 101-120, 1982.

Dias, P. Subramaniam, S. et al. "Effects of acupuncture in bronchial asthma: preliminary communication." Journal of the Royal Society of Medicine." 75, 245-248, 1982.

Doerner, J. "Circadian Rhythm and Traditional Acupuncture." American Journal of Acupuncture.

Dorland, W. Dorland's Illustrated Medical Dictionary (26th ed.) Philadelphia: W.B. Saunders, 1981.

Gaw, A., Lenning, W., et al. "Efficacy of Acupuncture on Osteoarthritic Pain." New England Journal of Medicine. 293, 375-378, 1975.

Gibb, G. "Acupuncture: Its Role in General Practice Medicine." Patient Management. 77-87, September, 1981.

Gunn, C., Ditchburn, F., et al. "Acupuncture Loci: A Proposal for their Classification According to their Relationship to known Neural Structures." American Journal of Chinese Medicine. 4(2), 183-195, 1976.

Gunn, C., Melbrandt, W., et al. "Dry Needling of Muscle Motor Points for Chronic Low Back Pain. Spine. 5, 279-291, 1980.

Gunn, C. "Type IV Acupuncture Points." American Journal of Acupuncture." 5, 51-52, 1977.

Han, J. and Terenius, L. "Neurochemical Basis of Acupuncture Analgesia." Ann. Review of Pharmacol. and Toxicol. 22, 193-220, 1982.

Hughes, J. "Isolation of an Endogenous Compound from the Brain with Pharmacological Properties Similar to Morphine." Brain Research. 88, 295-308, 1975.

Hyvarinen, J., et al. "Low Resistance Skin Points that May Coincide with Acupuncture Loci." Medical Biology. 55(2), 88-94, 1977.

Ionescu-Tirgoviste, C. "Acupuncture in the Treatment of Gastroduodenal Ulcer." American Journal of Acupuncture. 8(1), 19-24, 1980.

Jeffreys, D., Smith, S., et al. "Acupuncture Needles as a Cause of Endocarditis." British Medical Journal. 287, 689, September, 1983.

Juanila, S. "Acupuncture Superior to Peroxicam in the Treatment of Osteoarthritis." American Journal of Acupuncture. 10, 241-246, 1982.

Katz, R., Koo, C., et al. "Pain, Acupuncture and Hypnosis." In Advances in Neurology. Vol. 4. New York: Ravin Press, 1974.

Kerr, F. "Neuroanatomical Substrates of Nociception in the Spinal Cord." Pain. 1, 325, 1975.

Krippner, S., et al. Galaxies of Life. New York: Gordon and Breach, 1973.

Krueger, C. "Acupuncture Point Topography in the Horse." American Journal of Acupuncture. 4(3), 276-280, 1976.

Larre, C., Schatz, J., et al. "Survey of Traditional Chinese Medicine." Journal of Traditional Acupuncture. 35-40, Winter, 1984/85.

Ledergerber, C. "Transcutaneous Electroacupuncture and Electroanalgesia." American Journal of Acupuncture. 2(7), 127-136, 1979.

Le Roux, A., Chung, C., et al. "In Search of a Status for Acupuncture." S.A. Medical Journal. 66, 19-23, 1984.

Levine, D. "Acupuncture in Review: A Mechanistic Perspective." American Journal of Acupuncture. 8(1), 5-17, 1980.

Lewith, G. and Machin, D. "On the Evaluation of the Clinical Effects of Acupuncture." Pain. 16, 111-127, 1983.

Lewith, G. "How Effective is Acupuncture in the Management of Chronic Pain?" Journal of the Royal College of General Practitioners. 34, 275-278, 1984a.

Lewith, G. "Can We Assess the Effects of Acupuncture?" British Medical Journal. 288, 1475-1476, 1984b.

Li, C. "Primary Structure of Human Beta-Lipoprotein." Nature. 260, 622-624, 1976.

Loh, L., Nathan, P. et al. "Acupuncture Versus Medical Treatment for Migraine and Muscle Tension Headaches." Journal of Neurology, Neurosurgery and Psychiatry. 47, 333-337, 1984.

MacDonald, A. MacRae, K., et al. "Superficial Acupuncture in the Relief of Chronic Low Back Pain." Journal of the Royal College of Surgeons of England. 65, 44-46, 1983a.

MacDonald, A. "Segmental Acupuncture Therapy." International Journal of Acupuncture and Electro-therapeutics Research. 8, 267-282, 1983b.

Madill, P. "The Uses and Limitations of Acupuncture Point Measurement, German Electroacupuncture or Electroacupuncture Use According to Voll." American Journal of Acupuncture. 12(1), 33-42, 1984.

Man, P. and Chen, C. "Mechanism of Acupuncture Anesthesia-- The Two Gate Control Theory." Diseases of the Nervous System. 33, 730-735, 1972.

Man, P., and Wing, T. "Acupuncture Treatment for Chronic Pain-- A Six Year Follow-up Study." American Journal of Acupuncture. 10(2), 165-166, 1982.

Man, S., and Baranger, F. "Preliminary Study of Acupuncture in Rheumatoid Arthritis." Journal of Rheumatology. 1, 126-129, 1974.

Mann, F. "Acupuncture Analgesia." British Journal of Anaesthesia. 46, 361-368.

Melzak, R. and Wall, P., The Challenge of Pain. Markham, Ontario: Penguin Books, 1982.

Melzak, R., Stillwell, D., et al. "Trigger Points and Acupuncture Points for Pain: Correlations and Implications." Pain. 3, 3-27, 1977.

Ogata, H. "Simplified Energetic Concepts of Classical Chinese Acupuncture." American Journal of Acupuncture. 6(3), 219-228, 1978.

Ontario Council of Health. Acupuncture. Toronto, Ontario: Ontario Council of Health, 1974.

Pomeranz, B., Cheng, R., et al. "Acupuncture Reduces Electrophysiological and Behavioural Responses to Noxious Stimuli Pituitary is Implicated." Experimental Neurology. 54, 172-178, 1977.

Porkert, M. "Chinese Medicine: A Traditional Healing Science." Ways of Health. New York: Harcourt Brace, 1979.

Premaratne, A. "Fundamentals of Chinese Pulse Diagnosis in Acupuncture Therapy." American Journal of Acupuncture. 9(3), 265-268, 1981.

Price, D., and Rafii, A., et al. "A Physiological Analysis of Acupuncture Analgesia." Pain. 19(1), 27-42, 1984.

Rapson, L. "Acupuncture: A Useful Treatment Modality." Canadian Family Physician. 30, 109-115, 1984.

Reichmanis, M., et al. "D.C. Skin Conductance Variation at Acupuncture Loci." American Journal of Chinese Medicine. 4, 69-72, 1976.

Rogers, P. "Serious Complications of Acupuncture or Acupuncture Abuses." American Journal of Acupuncture. 9(2), 165-168, 1981.

Rubin, P. "Therapeutic Acupuncture: A Selective Review." Southern Medical Journal. 70(8), 974-977, 1977.

Schuldt, H. "Bioenergetics In Acupuncture and Electroacupuncture According to Voll." American Journal of Acupuncture. 6(1), 17-22, 1978.

Schutz, J. "A Common Purpose." World Health. 4-9, December, 1979.

Shenberger, R. "Acupuncture Meridians Retain Their Identity After Death." American Journal of Acupuncture. 5(4), 357-368, 1981.

Skrebanek, P. "Acupuncture and the Age of Unreason." Lancet. May 26, 1984.

Snyder, S. "Opiate Receptors and Internal Opiates." Scientific American. 230, 44-56, 1977.

So, S. and Lam, W. "Does acupuncture work in asthma." Asian Pacific Journal. 1(2), 168-169, December, 1983.

Sodipo, J. and Folaiye, J. "Acupuncture and Gastric Acid Studies." American Journal of Chinese Medicine. 7(4), 356-361, 1979.

Steiner, R. "Acupuncture Cultural Perspectives. The Western View." Postgraduate Medicine. 74(4), 60-67, 1983.

Steiner, R. "Acupuncture Cultural Perspectives: The Eastern View." Postgraduate Medicine. 74(4), 71-78, 1983.

Takishema, T. Mue, S. et al. "The bronchodilating effect of acupuncture in patients with acute asthma." Annals of Allergy. 48, 44-49, 1982.

Tan, L., Tan, M., et al. Acupuncture Therapy: Current Chinese Practice. (2nd ed.). Philadelphia: Temple Univ. Press, 1976.

Tsuei, J. "Recent Developments in Clinical Acupuncture." American Journal of Chinese Medicine. 11(1-4), 150-158, 1983.

Wing, T. "Automated Approach to Meridian Balancing and Electroacupuncture Instrumentation." American Journal of Acupuncture. 5(3), 261-269, 1977.

Wulfson, N., et al. "Twenty-seven Acupuncture Points: Their Electrical Resistance." Handbook of Acupuncture. New York: Van Nostrand Reinhold, 1976.

Voll, R. "Verification of Acupuncture by Means of Electroacupuncture According to Voll." American Journal of Acupuncture. 6(1), 5-15, 1978.

Zong-Xiang, Z. "Research Advances in the Electrical Specificity of Meridians and Acupuncture Points." American Journal of Acupuncture. 9(3), 203-216, 1981.

Province of British Columbia

Ministry of Health

NEWS RELEASE

MINISTRY OF HEALTH

FOR IMMEDIATE RELEASE

1988:46

July 21, 1988

ACUPUNCTURE REPORT RELEASED

Victoria, B.C. - A report by The Minister's Advisory Committee on Acupuncture, which recommends that the practice should be formally controlled through a self-supporting regulatory structure, has been released by Health Minister Peter Dueck.

The Minister said that while the government does not necessarily endorse the recommendations produced by the Committee, it was releasing the report in order to encourage public comment and feedback on its findings.

The report indicates that no biological or physiological basis for the traditional Chinese medical practice has been established, but acknowledges that relief from pain and other symptoms (through the use of acupuncture) is real, and cannot be attributed to either a placebo effect or the power of suggestion.

The Committee, set up by former Health Minister Jim Nielsen in late 1984, includes representation from the Acupuncture Association of B.C., the College of Physicians and Surgeons of B.C., and the Ministry of Health. It has reviewed current literature and the present state of acupuncture in British Columbia and other jurisdictions, and received submissions from various health care groups, acupuncture associations, and individuals.

The report says the principal use of acupuncture in North America has been in the treatment of pain - lower back pain, arthritic pain, migraine headaches, various types of neuralgia, and as an anaesthetic.

. . . 2

It has also been used to treat a variety of non-painful conditions such as asthma, hiccoughs, obesity, and as an aid to help people stop smoking.

It says that while the success rate for acupuncture varies considerably between individuals and between conditions being treated, research indicates that complications and side effects from its use are rare.

The Committee's recommendations were:

* Acupuncture should be formally controlled in some manner.
* Practice should neither be restricted to medical practitioners alone, nor should it be simply open to any member of the public.
* Superintendency of non-physician practitioners should be required in most cases, but the degree would vary in accordance with the patient's health and the nature and severity of the condition being treated.
* Medical practitioners should not be specifically regulated.
* Government should appoint the first regulatory body, and subsequent bodies would be a combination of elected members and government appointees.
* No person - including a medical practitioner - would be permitted to use the title "acupuncturist" unless registered in accordance with the regulations.
* The entire regulatory structure should be self-supporting.

-30-

For further information, contact:
Graydon Gibson,
Information Services Branch,
Ministry of Health.
(604) 387-2323